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New Vaccination Law in Siam.

BY

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SMALL POX, VACCINATION AND THE NEW VACCINATION LAW IN SIAM.

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Small Pox in Siam.

Throughout Siam as in most other Eastern countries which are not yet sufficiently protected by Vaccination, Small Pox is endemic, and from time to time takes on an epidemic form. Amongst the Siamese the disease has two names, the classic name being "Kai dara pit" meaning the fever of a very harmful nature, while the vulgar title is "fi dat" the disease characterised by the eruption of boils all over the body. There are no records which show when small pox first came to this country.

In Bangkok it would seem that there is a fairly regular cycle of epidemicity. Every three or four years the disease becomes epidemic, persists for a few months, and dies down again for another two or three years.

The Seasonal Incidence of Small Pox. Thirty per cent of the cases occur during January and nineteen per cent during December—the coolest months of the year in Bangkok.

The General Death Rate from Small Pox cannot be given in the absence of any knowledge of the number of cases which recovered, but of 379 cases under observation in the Hospital for Infectious Diseases 211 died, giving a death-rate of 55.9%.

During the epidemic of 1911-12 the total deaths from small pox amounted to 3,368, equal to a mortality of 4.3 per thousand of the population amounting to 540,679 according to the late census. (Sept. 1909.)

The Age at Death in the above cases is given in the following table which confirms the view that the population of Bangkok is not yet sufficiently protected by vaccination.

Ages at death from Small Pox.

| Age | Sex | | Total | Rate per cent. |
|---------------------------|-------|--------|-------|-------------------|
| | Male | Female | | |
| Under 3 months | 34 | 32 | 66 | 2.7 |
| 3 months to 1 year | 277 | 293 | 570 | 24.0 |
| 1 to 5 years | 367 | 349 | 716 | 30.2 |
| 5 „ 10 „ | 120 | 125 | 245 | 10.3 |
| 10 „ 20 „ | 222 | 132 | 354 | 15.0 |
| 20 „ 25 „ | 142 | 64 | 206 | 8.7 |
| 25 „ 35 „ | 125 | 48 | 173 | 7.3 |
| 35 „ 45 „ | 20 | 6 | 26 | 1.0 |
| 45 „ 55 „ | 6 | 1 | 7 | ... |
| 55 „ 75 „ | 0 | 1 | 1 | 0.5 |
| Unknown | 3 | 1 | 4 | ... |
| | 1,316 | 1,052 | 2,368 | |

We note then that more than a quarter of these deaths were in infants under one year of age and that 67.2 per cent were in children under 10 years of age, a sure indication that vaccination has not been carried out sufficiently in Bangkok.

Methods of prevention against Small Pox in Siam. Vaccination is popular with the Siamese and has been so since its introduction in January 1840. There are no “conscientious objectors” in Siam, and wherever and whenever a vaccinating officer is at work the people readily submit themselves or their children to vaccination.

In the absence of vaccine lymph inoculation is still said to be practised freely in the interior of Siam.

The honour of first introducing Inoculation and later on Vaccination into Siam is due to the American Missionaries.

Inoculation against Small Pox in Siam. As the history of these two movements is of some considerable interest, I may be

pardoned if I give here a few historical details. In this respect I cannot do better than quote the words of one of the principal actors in the movement—the late Dr. Bradley—the well known American Missionary and Editor of the “Bangkok Calendar.” In an article entitled “Inoculation for Small Pox” published in the “Bangkok Calendar” of 1865, Dr. Bradley writes as follows :

“There was once a very extraordinary waking up of the Siamese mind to do something to modify the virulence of small pox. It took place in the latter part of A. D. 1838. That annual scourge was unusually widespread and malignant at that time. Great efforts had been made by the missionaries every year for the four previous years to introduce vaccination, but all in vain. Being surrounded by the small pox, with scarcely any hope of shutting it out from their own families, they then felt constrained, by the providence of God, to endeavour to save their children by inoculating them with the small pox. The blessing of the Lord made it a complete success, every one of the subjects of the experiment having taken the modified small pox in the mildest form. His late Majesty the King of Siam, being informed of it, sent a body of the Royal medical faculty to the missionary physician to enquire into the matter, and then make to him a full report of their investigations. It was a very novel and exciting event for those early years of Prot. Missions, to be visited by such a committee, from such a monarch. Those servants of the king were very particular and thorough in their enquiries, for they had a great charge in hand, and a stern master to serve.

“About that time, there was issued, from the Press of the A. B. C. F. M. in this city, a little tract in the Siamese language, setting forth the advantages of inoculating for small pox over having it the natural way, and the wisdom of the former course when the Scourge is pressing fearfully upon one, and it is impossible to obtain the vaccine virus. A copy of this was sent to the king, and it was eagerly sought for and read by princes, lords, and the commoners. Presently ten or twelve royal physicians were ordered by the king to visit the missionary physician daily, for the purpose of seeing his practice in inoculating and treating the small pox thus modified and divested of its virulence, and in this way to qualify themselves for inoculating in the royal palace.

“ Having faithfully studied the art a few days with praiseworthy proficiency, they were armed with lancets, and required to inoculate all that were unprotected in the palace of the king, and in the palaces of the princes, and in the families of the nobles and lords, and other officers of government, in the city and out of the city. Other native doctors were encouraged by the king to follow this royal example, who extended the work, it is believed, into many of the provinces of Siam.

“ Inoculation was then the engrossing business and care, not only of nearly all the native physicians, but also of a large proportion of the better classes of the people, from the beginning of the year 1839 until the month of April. It is impossible to estimate the many thousands that were within that period inoculated ; and it is very remarkable that amongst them all, there was not, probably, more than one case in five hundred that proved fatal, until the hot season was ushered in, when the work became so much less successful, that it was suspended.

“ The king then evinced his high appreciation of the blessings of inoculation by presenting to each of the royal physicians, who had labored in the work, a purse of silver varying from eight to four hundred ticals, and to the missionary physician a purse of two hundred and forty ticals.

“ So generally was inoculation accounted a perfect success, that those who had been waked up and blessed by it, wished for nothing better to take its place ; and consequently it became subsequently an obstacle to the introduction of vaccination ; because it was regarded as almost as safe, and always a more certain protection against small pox in the natural way, than vaccination.”

“ Inoculation was not without its dangers, however, and when vaccination came into vogue, inoculation was abandoned for a safe method of prevention.”

Vaccination in Siam.

As has been already seen, the introduction of vaccination had been attempted for several years previous to the adoption of inoculation but it was not until the middle of January 1840 that the first active vaccine scabs were brought to Siam by an American

Missionary from Boston U. S. A. via the Cape of Good Hope. On the arrival of the vaccine scabs great difficulty was experienced in obtaining subjects for vaccination but fortunately the then Prime Minister—Somdej Ong Yai—came to the rescue. He placed seventy-five children at the disposal of the missionaries and out of a total of 450 insertions, three or four good pustules were found on the 6th day. From these vaccine was propagated and over a hundred persons were vaccinated, but at the end of three months, the virus lost its efficiency.

“Vaccination was resuscitated August 1844 from scabs which were sent from Boston, U. S., overland, being enveloped in a little bees-wax. It was propagated with unusual energy and thoroughness by the mission of the A. B. C. F. M. from that time onward for a period of about ten months, when the work was again stopped for the want of fresh virus from the pustules of living subjects. About one thousand three hundred persons were thoroughly vaccinated during that period out of about two thousand subjects experimented upon.

“After an interval of a year or more, the blessing was again brought back through the influence of an American friend sending the virus overland as before; and thus it came and departed, with intervals varying from one year to two, until Dr. Campbell, R. N., F. R. G. S. L., in giving to it more thorough attention at all times, for a period of five or six years, has kept it with us much the greater part of the time, and has done great good by it. It is now a settled blessing, not only to the families of all European and American residents of Bangkok, but also to the Siamese in general, among whom it is slowly winning, week by week, a wider range of confidence and usefulness.”

It was not until the year 1904, that the Siamese Government undertook the preparation of calf lymph in Bangkok. A Vaccine Laboratory was then opened at Si Kak Phya Sri by the Hospital Department, and large quantities of calf lymph were supplied to the public. It was soon found that more commodious premises were required and a Serum and Vaccine Laboratory was installed at Phrapatom and work was commenced there in August 1906 (Siamese Era 125). During the year 1912 the Vaccine Laboratory was merged in the Pasteur Institute under the immediate supervision of Doctors

Manaud and Robert—both of whom have been trained in the Pasteur Institute at Paris. During the past seven years 1,890,596 doses of vaccine lymph have been issued to the public and still Small Pox continues to levy heavy toll upon the infants of Siam. It has long been evident therefore that the present voluntary system of vaccination is quite inadequate as a protection against epidemics of Small Pox, but before a law for Compulsory Vaccination could be enacted certain necessary preliminary steps had to be taken.

The establishment of a Vaccine Laboratory was *the first step*, and as we have already seen, this has been an unqualified success.

The second step was the training of a sufficient number of vaccinators. For several years past suitable young men have undergone a course of instruction with regard to small pox, the effects of vaccination and the methods of vaccination. These have been examined by myself or my deputy, and certificates have been granted only to those who have shown reasonable proficiency and knowledge. In addition to these all our Sanitary Inspectors are trained in the art of vaccination.

A third step was to accustom the public to regular vaccination every year. In order to carry this out a beginning was made seven years ago in Bangkok. Temporary vaccination stations were established by the Local Sanitary Department in hospitals, temples and police stations throughout the city. These were kept open during the cooler months of the year which is the season most preferred by Siamese for vaccination. On the first occasion 3,620 vaccinations were performed. Every year since then free vaccination has been provided not only in Bangkok but also in the outlying suburbs and in the Muangs of the Bangkok Monthon. During the past seven years, a total of 80,934 vaccinations have been performed by officers of the Local Sanitary Department alone,

In the other Monthons of Siam—those under the Ministry of Interior—vaccination has also been carried out on a large scale. During the past twelve months a special vaccination campaign has been carried out in the Interior at the instigation of His Majesty the King, who has most generously defrayed all the expenses out of His Majesty's own purse.

Up to the 13th April of this year this special campaign has resulted in 304,938 vaccinations during the twelve months. So far

then as the present generation is concerned it may be said that a large portion of the population of Siam is for the present fairly well protected against Small Pox. People in the distant parts of the Interior who never heard of vaccination before will now be able to judge of its value when the next case of small pox develops in their midst. They are now accustomed to the operation and to the appearance of vaccinating officers in their district, so that the country may be now considered to be ready for the final step to which we have looked forward so long—*i. e.* A Compulsory Vaccination Act.

The Vaccination Law of B. E. 2456.

On the 19th. of February of this year, B. E. 2456 (1914), His Majesty was graciously pleased to sanction the enactment of a Vaccination Law for Siam. The law was drafted by the Local Sanitary Department for application in the Bangkok Province and was revised by His Royal Highness Krom Phra Damrong, Minister of Interior, so that it is now applicable to the whole of Siam. At present it will only apply to the Monthon of Bangkok, but at any time it may be proclaimed for other Monthons in the Interior.

A few words may now be said with regard to the chief provisions of this Law. The basal idea is the desire to have every person now in the kingdom or who may enter the kingdom rendered immune to small pox. Therefore as soon as this law comes into force every person who has not previously been successfully vaccinated must become vaccinated, unless it can be shown by a certificate from a duly qualified Public Vaccinator that he or she is immune to vaccination. Immunity may mean that he or she has previously suffered from small pox or has been repeatedly vaccinated without a successful result.

Every parent or guardian of a child over one month old must take the earliest opportunity of having such child vaccinated. No definite time limit is laid down in the law, as for example during the first three, six or twelve months after birth, owing to the many difficulties which might be experienced under local conditions. It will be left to the Superintendent of Vaccination to make such arrangements as are necessary from time to time and to notify the time and place for vaccinations in any district. This will enable us to commence work during the cooler months of the year when vaccination is more popular in Siam. The origin of this preference is doubtless

due to the fact that it was only in cool weather that vaccine lymph could be transported any appreciable distance when transport was slow and difficult. Nowadays, with railway communication, ice and thermos flasks, efficient vaccine lymph can be transported to almost every corner of the country at any time during the year.

Another point of importance in the law is the provision that the vaccinated child must be brought back to the vaccinator on the 8th. day after vaccination so that the result may be verified. This will enable us to repeat the vaccination when necessary, and to check the efficiency of the lymph and the capabilities of the vaccinator. Certificates showing the result of Vaccination will be granted.

We look forward to the day when no child will be admitted as a scholar into any school whatever unless he can show a certificate of vaccination or of immunity from Small Pox.

One of the most important clauses in the law is Clause IX. This gives the Minister power to issue a public notice enforcing vaccination or revaccination upon all the inhabitants of a district or locality within a specified time. Such power would only be taken in the possibility of Small Pox becoming epidemic in such district or locality. No definite age is prescribed by this law for revaccination, but it is hoped that an addition will be made to it, definitely laying down that revaccination during the 9th. year will be compulsory.

The usual clauses permitting of postponement of vaccination in case of sickness of the child are included in the law.

Public vaccination will be performed free of charge at such times and places as may be notified by the Superintendent of Vaccination. Any persons may however apply to a public vaccinator to perform vaccination at his residence and in such case, if the public vaccinator is employed by the government, a fee will be charged at a rate prescribed by the Minister. No restrictions are placed upon private medical practitioners as to time and place of vaccination and the fees to be charged.

They will however require to take out licenses as public vaccinators, if they wish to have their certificates recognised, for in accordance with Clause XI the certificate of a public vaccinator shall be the legal proof of being vaccinated in accordance with the pro-

vision of the Law. The reason for this is the necessity of protecting the public. No unqualified person will be recognised as a Public Vaccinator and the lymph to be used must only be that which has been authorized by the Minister.

The dangerous practice of inoculating with small pox virus is now declared to be a criminal offence, and the offender will be liable to heavy penalties.

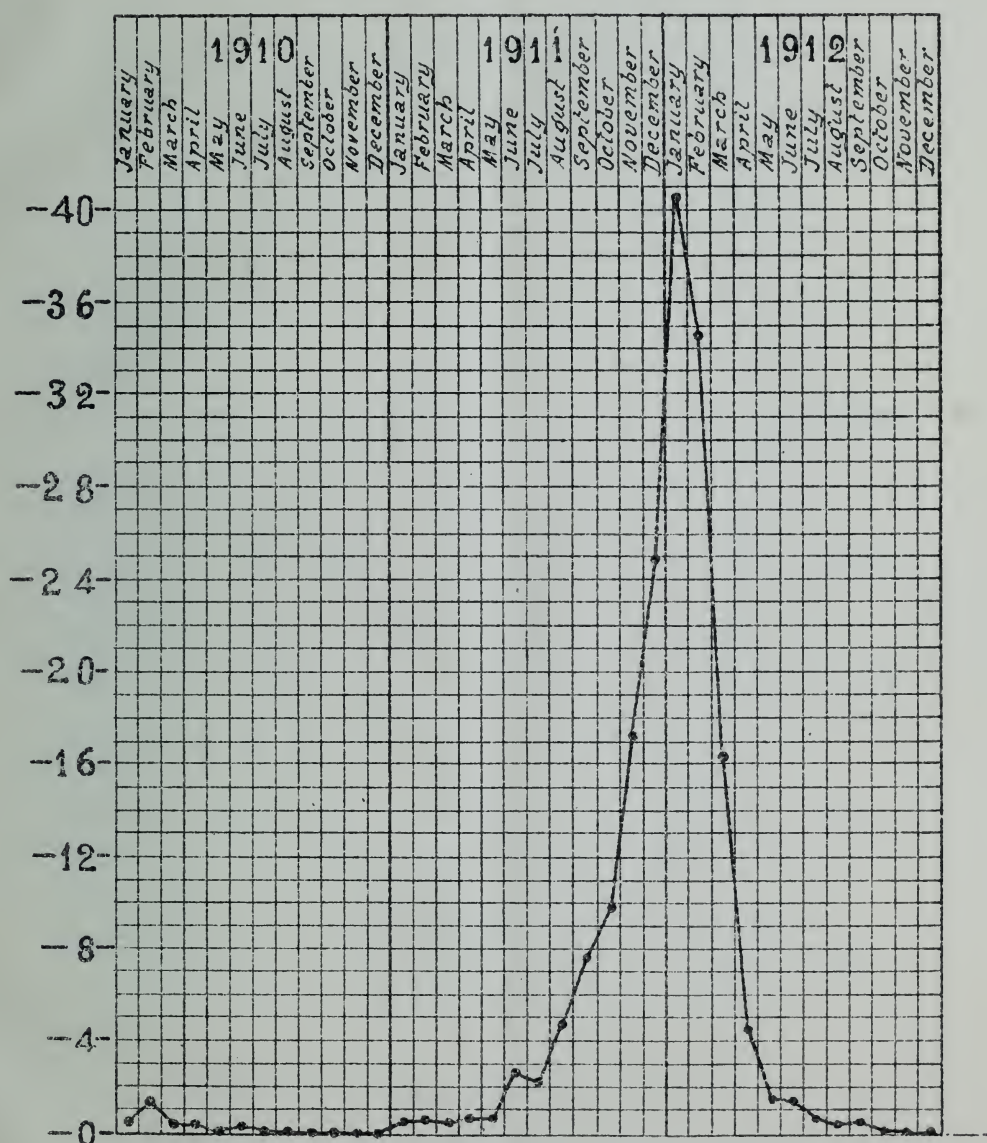
In conclusion, it may be stated that the "Conscientious objector" has not been recognised in this law.





*Dr. Highet on "Small Pox, Vaccination
and the New Vaccination Law in Siam"*

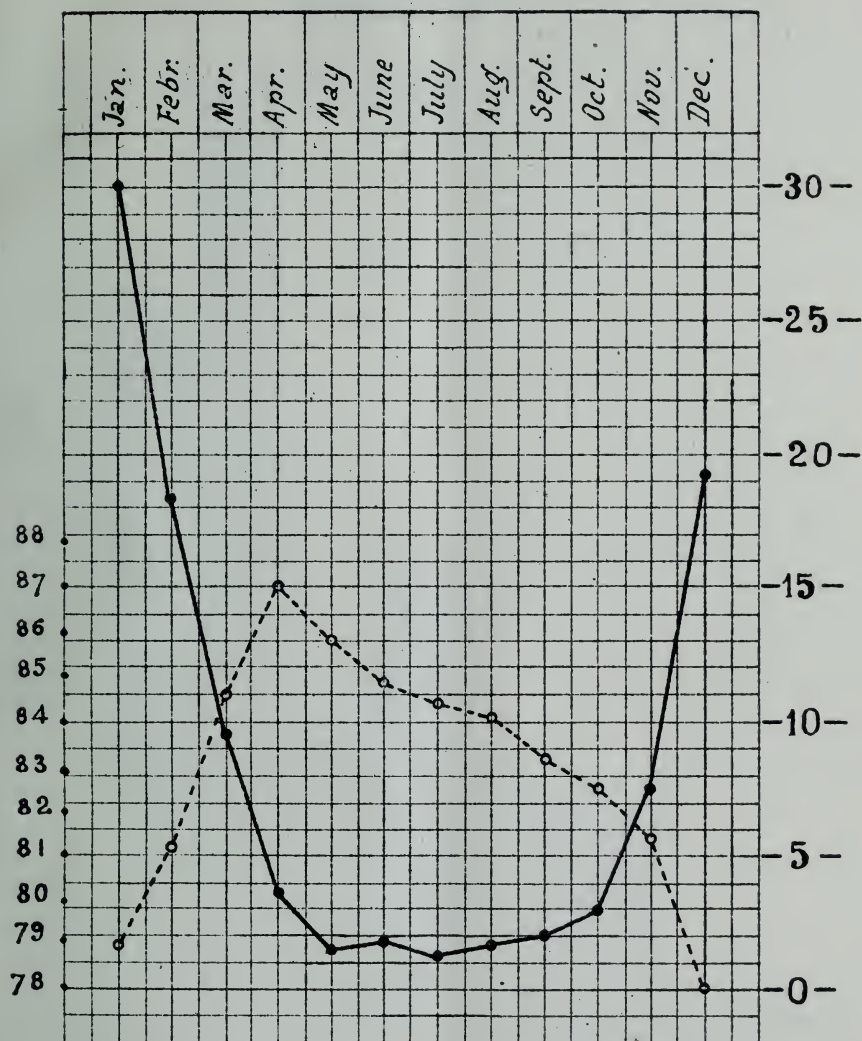
CHART-I-



*Monthly Death-Rate from Small-Pox
shown as a Percentage of the total Deaths
from all causes Month by Month in Bangkok,
during three years.*

*D. Hight on "Small Pox Vaccination
and the New Vaccination Law in Siam"*

CHART-II-

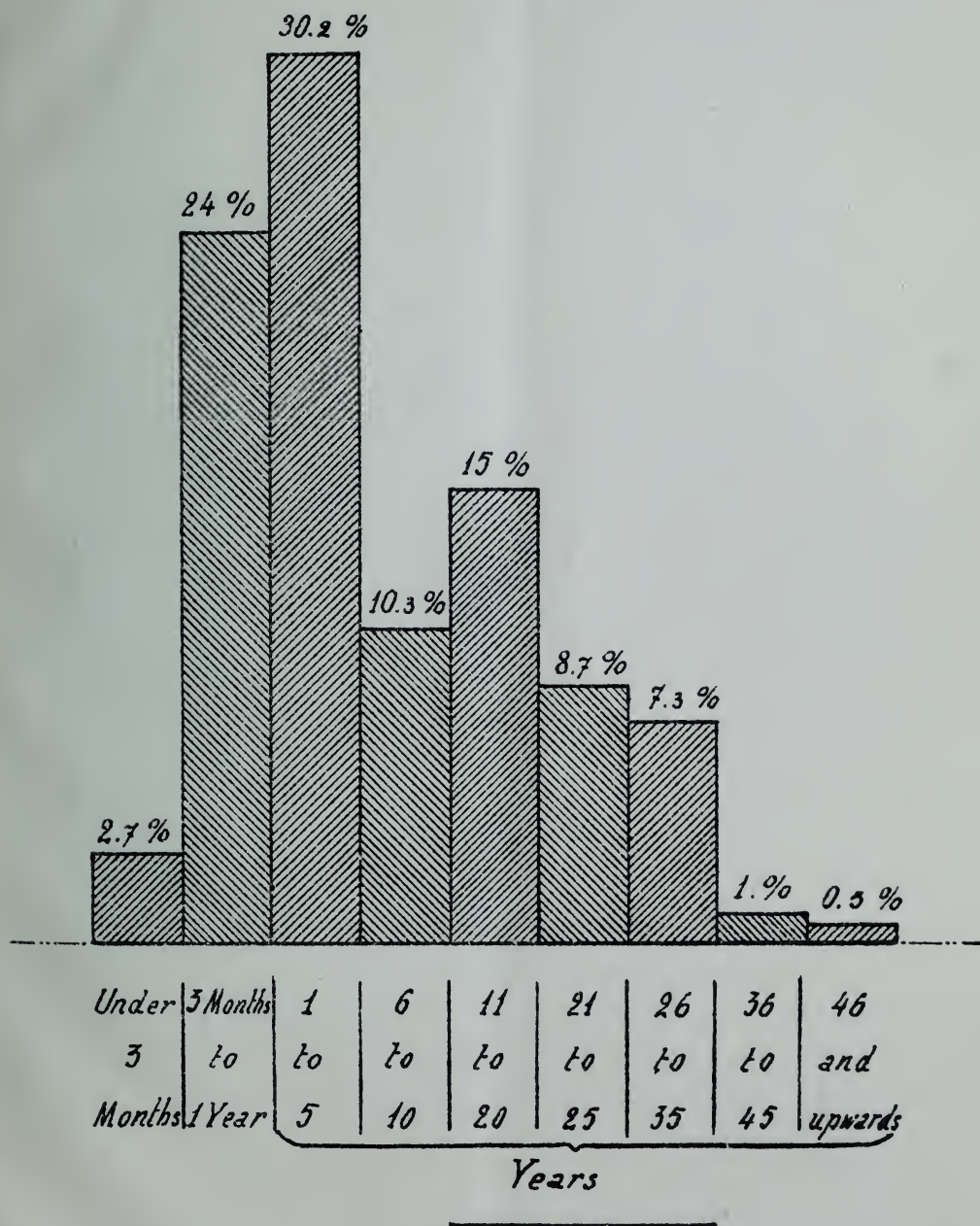


... Plain lines show Monthly Death-rate in Bangkok from Small-Pox calculated in Percentages of a total of 2594 deaths during three years.

Interrupted lines show the mean atmospheric temperature in Bangkok in degrees Fahrenheit.

*Dr Hight on "Small Pox. Vaccination
and the New Vaccination Law in Siam."*

CHART-III-



*Percentage of Small-Pox Deaths
at Different age Periods*

